CHAPTER 1 – INTRODUCTION

Field procedures were designed for the Standard Landscape (quantitative) Method for fire regime and Fire Regime Condition Class (FRCC) to describe ecological characteristics of the landscape-, strata, and stand that can be used to classify fire regimes and FRCC within the broad definitions from the coarse-scale classification by Hardy et al. (2001) and Schmidt et al. (2002). The Project Landscape or Project Area is the unit encompassing the large area being analyzed for fuel management, fire use, wildland fire, or other management applications. Examples include: 1) landscapes where fire, vegetation, or fuel management projects are being considered, 2) landscapes - with- a fire management planning unit delineation, 3) - areas encompassing a National Fire Plan Operations and Reporting System (NFPORS) project area or treatment unit, 4) - areas with a wildland fire incident, or 5) other landscapes assessed for fire, vegetation, and fuels management planning. For FRCC assessments, each Project Landscape is subdivided into "Strata." Strata are logical units based on differences in biophysical attributes, natural (historical) fire regimes, current vegetation and fuels, management treatment units, wildland fire incidents, or other factors (Note that the term "Strata" is used for both the singular- and plural cases throughout the guidebook). Methods were designed to provide consistency and quantification from the stand- to landscape scales, and to allow extrapolation to larger scale assessment projects (e.g., Hann and Bunnell 2001, Hardy et al. 2001, Schmidt et al. 2002). For small-scale projects or treatment units (such as a single patch or stand) the fire regime and FRCC should first be determined for the surrounding landscape. Then a stand-scale FRCC can be determined that can be used for NFPORS or other reporting requirements for projects at this scale.

FRCC Objectives

Specific objectives established by Agency leadership through the Inter-agency fuels committee guided the development of the FRCC procedures:

1) Procedures would be designed to reflect the fire regime and FRCC as defined and described by Hardy et al. 2001 and Schmidt et al. 2002, with the purpose to support multi-scale planning and monitoring based on a broad-based vegetation and disturbance regime sustainability index (e.g. FRCC), as described by Hann and Bunnell 2001.
2) Field methods would be developed that would be emulated by mapping procedures so users would understand the implications of mapped fire regimes, FRCC, and associated measures based on their field applications.
3) Field and mapping procedures would be based on simple calculations, classification, and commonly available data so that users can hand calculate and classify in the field and follow the path of mapping determinations.
4) A standard quantified field method would be developed that was flexible in application, ranging from rapid reconnaissance estimates with only moderate confidence, to detailed

determination, with high confidence. A companion scorecard would be developed for rapid determinations that would emulate the outcome of the standard quantified method.

5) Development of the field and mapping procedures would follow similar concepts and terminology as those for other resource condition measures (e.g. range, watershed, forest and rangeland health) to facilitate interdisciplinary communication and an integrated approach to multi-scale planning and monitoring.

The coarse-scale definitions of FRCC follow similar concepts as other resource (e.g., forest, range, watershed, wildlife) condition class tools comparing current characteristics to the natural reference conditions (Clements 1934, Hann et al. 1998, Lee et al. 1998, Rieman et al. 2000, Samson 1919, Wisdom et al. 2000). Methods for FRCC classification followed those conceptualized by Heinselman (1981) and refined by Brown (1995). Subsequently, adjustments were made for multi-scale situations (Caprio 2000, Hann and Bunnell 2001, Hann et al. 2002, Hessburg et al. 1999, Kaufman et al. 2000, Keane et al. 2002). Central to the FRCC concept is the natural or historical range of variability (NRV or HRV) (Landres et al. 1999, Morgan et al. 1994), which is defined as Condition Class 1, and the concept of departure from NRV, which reflects Condition Class 2 or Condition Class 3 (Hann and Bunnell 2001, Hardy et al. 2001, Schmidt et al. 2002).

The typical errors in fire regime relate to classification into surface or replacement for many types that are actually mixed, and classification into infrequent for many types that may be frequent. The typical errors in condition class relate to classification of 2 instead of 3 or vice versa, less frequently a 1 instead of a 2 or vice versa, and seldom a 1 instead of a 3 or vice versa. The most common reason for error is misclassification of the potential natural vegetation, and thus an error in reference conditions. Landscapes where the most common errors occur in potential natural vegetation identification are those naturally dominated by grass or shrub that are now dominated by trees.

The FRCC data fields described in the following Chapters pertain to several scales: 1) the entire landscape, 2) the biophysical stratifications (Strata), and 3) individual stands, depending on the method used. As mentioned above, stratifications of the Project Landscape are developed based on differences between biophysical conditions, natural or historical fire regimes, current vegetation-fuel class conditions, current fire regimes, or management treatment units. The 3 to 5 page set of Standard Landscape Method worksheets (appendix 3-A) were designed so that the fire regime, FRCC, ecological risk, abundance class, and other associated variables can be calculated and graphed during a single field training session so that all users understand the

associated calculations and classifications. However, a software program has been developed that will compute all calculations and graphs after initial data entry.

Guidebook Structure

The guidebook is arranged in five chapters. The first two are an introduction and an overview of the FRCC process. Chapters 3-5 were created to be stand alone documents depending on the method you choose. Chapter 3 being the Standard Landscape Method, Chapter 4 the Landscape Scorecard Method, and Chapter 5 the Stand Scorecard Method. Each of these method chapters has an appendix attached with the required forms and code sheets for that specific method. There may be some text in Chapters 4 and 5 that refer you to the Standard Landscape Method for clarification. Thus, you may want to have Chapter 3 handy even when applying the other methods.

Pages and Tables have numbers that correspond to the Chapter they are in with the first number always representing the chapter (e.g. Page 3-4 would be page 4 of Chapter 3, Table 2-1 would be table 1 of Chapter 2).